CLAIMS:

1. A method for analyzing the runtime behavior of a program given a set of one or more probes and points for inserting the probes for performing a specified inspection, the method comprising:

providing a compiler with one or more of the following types of semantics about each probe: specifying probe's context, its filter criteria, whether it is a fast-path probe, whether it is a timing probe, the probe's guard swing, the probe's context hardness, and the probe's temporal hardness; and

compiling the program with the one or more probes and the semantics.

2. The method of claim 1, wherein the semantics relate solely to the probe's context.

3. The method of claim 1, wherein the semantics relate solely to the probe's filter criteria.

4. The method of claim 1, wherein the semantics relate solely to whether the probe is a fast-path probe.

5. The method of claim 1, wherein the semantics relate solely to whether the probe is a timing probe.

6. The method of claim 1, wherein the semantics relate solely to the probe's guard swing.

7. The method of claim 1, wherein the semantics relate solely to the probe's context hardness.

8. The method of claim 1 further comprising receiving one or more insertion points from a user indicating where to insert the native probes.

9. The method of claim 1 further comprising receiving an operation from the user encoded as a Java subroutine.

10. The method of claim 9 further comprising receiving an operation from the user encoded as a native subroutine.

11. An information processing system comprising:

an input/output device for receiving a program to be analyzed, a set of probes to be inserted in the probe, and probe semantics relating to the set of probes; and

a processor for executing inserting the probes; and

a memory for storing the information and the program to be analyzed, wherein the probe semantics include at least one of: specifying probe's context, its filter criteria, whether it is a fast-path probe, whether it is a timing probe, the probe's guard swing, the probe's context hardness, and the probe's temporal hardness.

12. The system of claim 12 wherein the input/output device further comprises a CDROM drive.

13. The system of claim 13 wherein the input/output device further comprises a network interface.

14. The system of claim 13 wherein the memory further comprises a compiler for compiling the program with the one or more probes and the information.

15. A computer readable medium for analyzing the runtime behavior of a program given a set of one or more probes and points for inserting the probes for performing a specified inspection with minimal perturbation comprising instructions for:

providing a compiler with one or more of the following types of semantics about each probe: specifying probe's context, its filter criteria, whether it is a fast-path probe, whether it is a timing probe, the probe's guard swing, the probe's context hardness, and the probe's temporal hardness; and

compiling the program with the one or more probes and the semantics.

16. The computer-readable medium of claim 15 wherein the semantics relate solely to the probe's context.

17. The computer-readable medium of claim 15 wherein the semantics relate solely to the probe's filter criteria.

18. The computer-readable medium of claim 15 wherein the semantics relate solely to whether the probe is a fast-path probe.

19. The computer-readable medium of claim 15 wherein the semantics relate solely to whether the probe is a timing probe.

20. The computer-readable medium of claim 15 wherein the semantics relate solely to the probe's guard swing.

21. The computer-readable medium of claim 15 wherein the semantics relate solely to the probe's context hardness.